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The North Sea: Energy transition in action

Geosciences and the energy transition: resources on a finite planet

Dr Andy Samuel, Chief Executive

7 September 2021

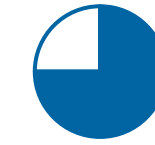
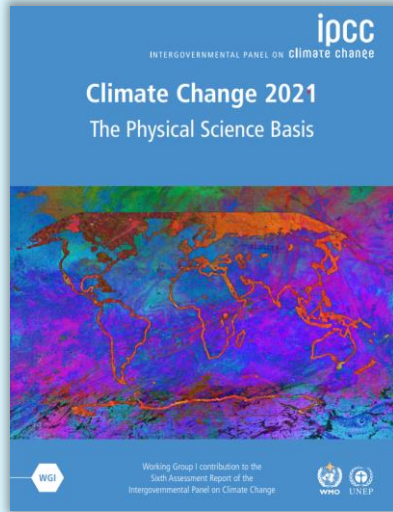
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Oil and Gas under the spotlight



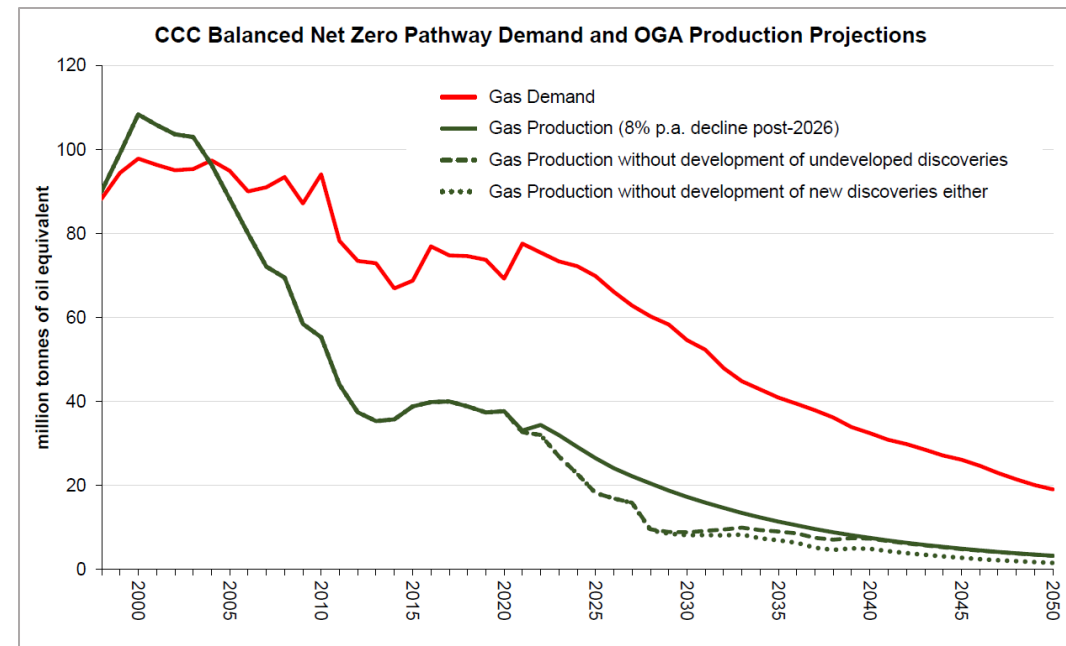
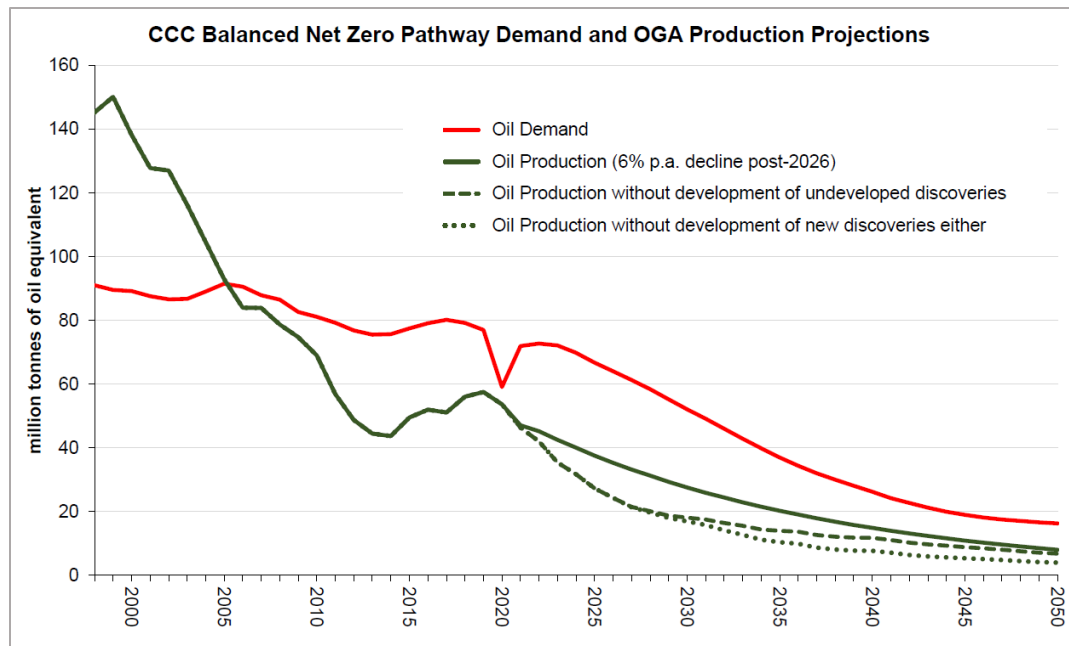
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Oil & gas meets
c. $\frac{3}{4}$
UK energy demand

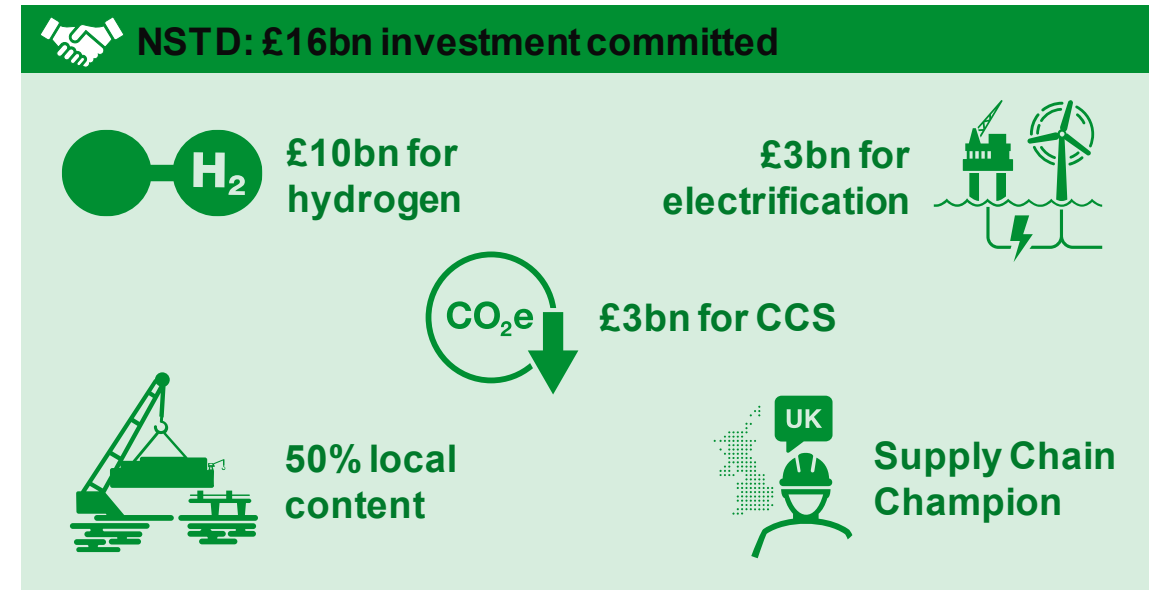


-33%
Reserves replacement

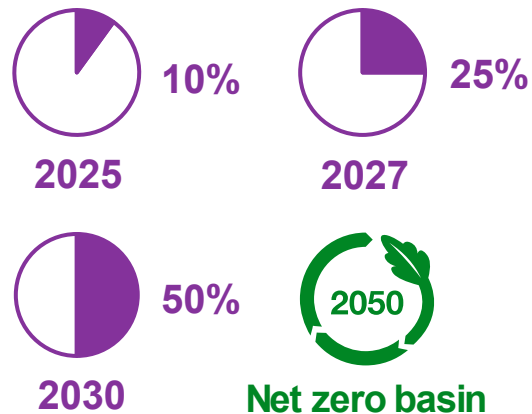


North Sea Transition Deal

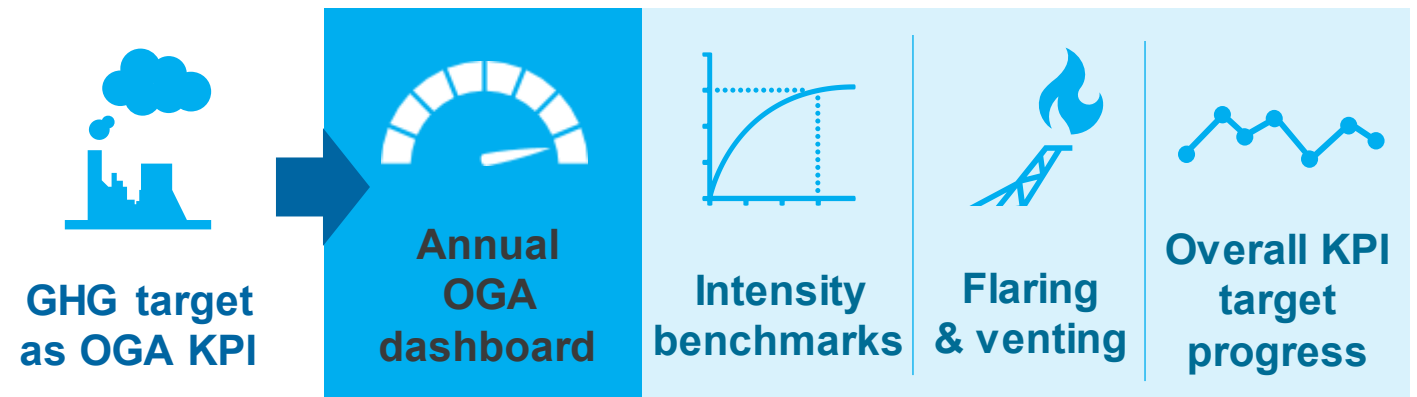
- Govt & industry commitment to transition
- First of kind for G7 country
- Future licensing climate checkpoint
- Quid pro quo



Industry commitment to reducing upstream GHG emissions



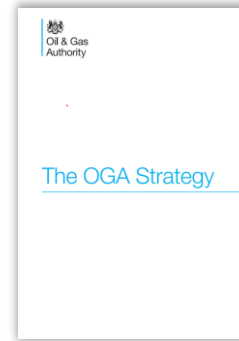
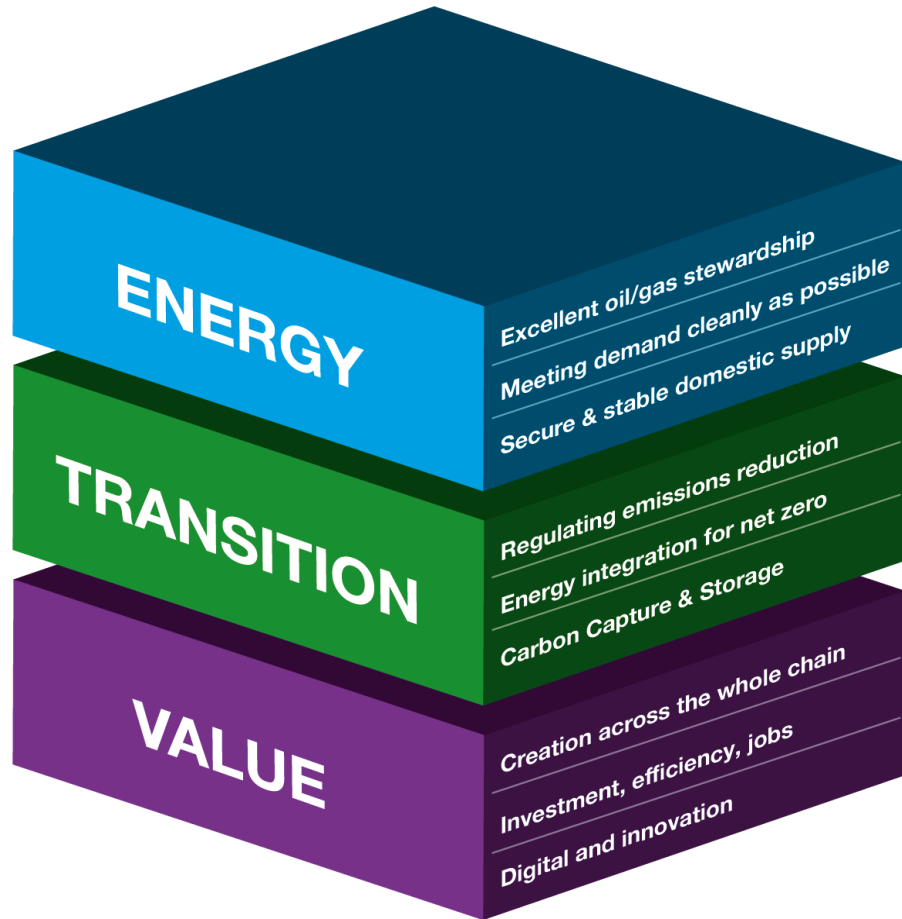
OGA tracking and monitoring progress



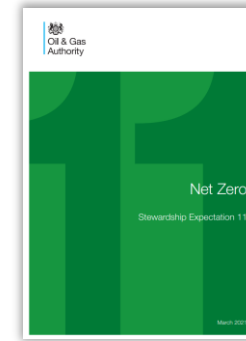
Driving rapid transition



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**OGA
Strategy**



**Net zero
expectation**



22%

Annual reduction in
flaring volume



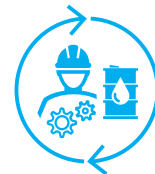
10%

Annual reduction in
CO2 emissions



980,000

tonnes CO2
avoided YTD



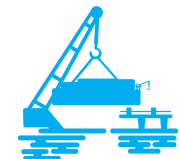
80%

OGA PE target retained



11.2/boe

Unit operating cost



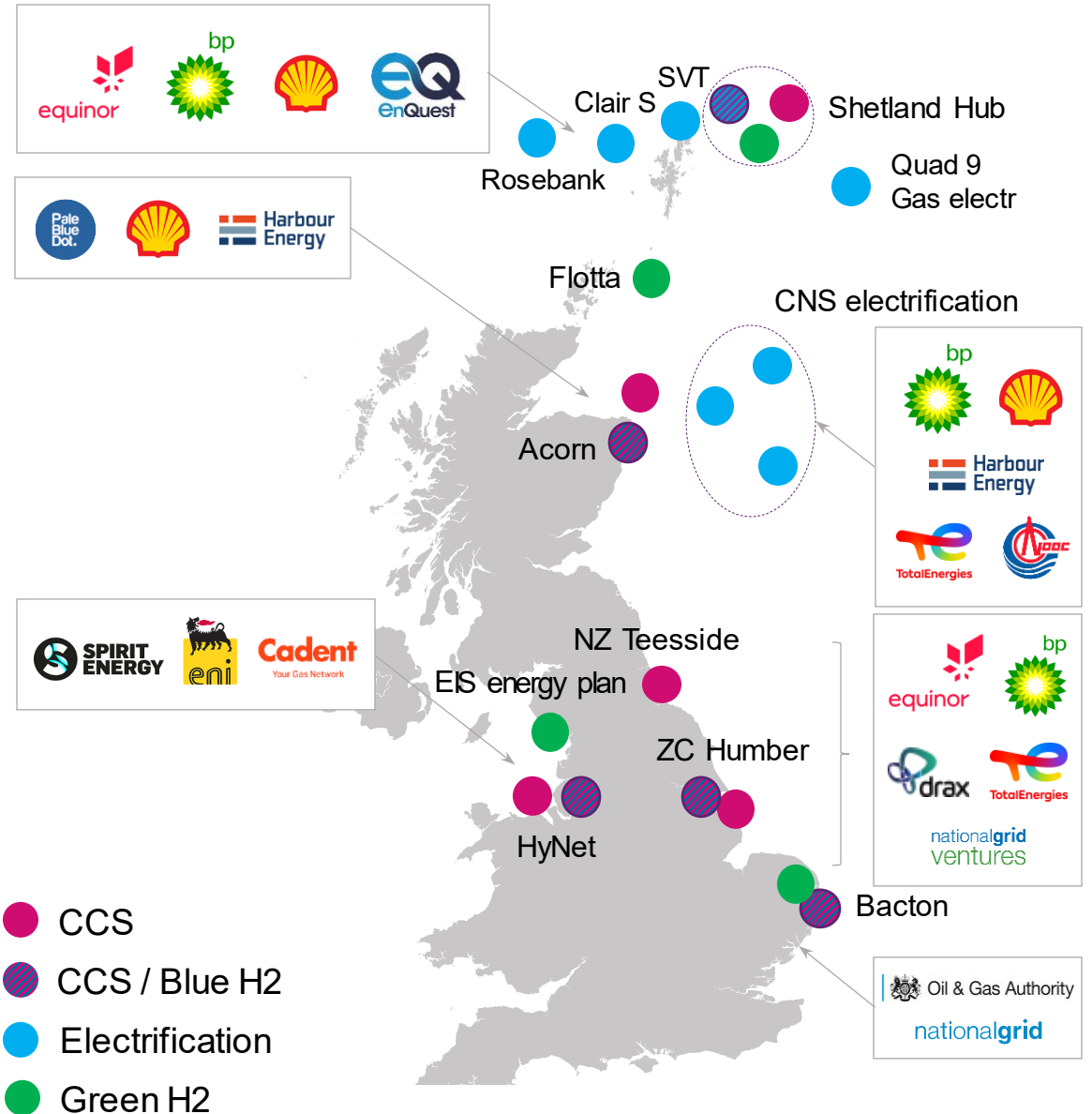
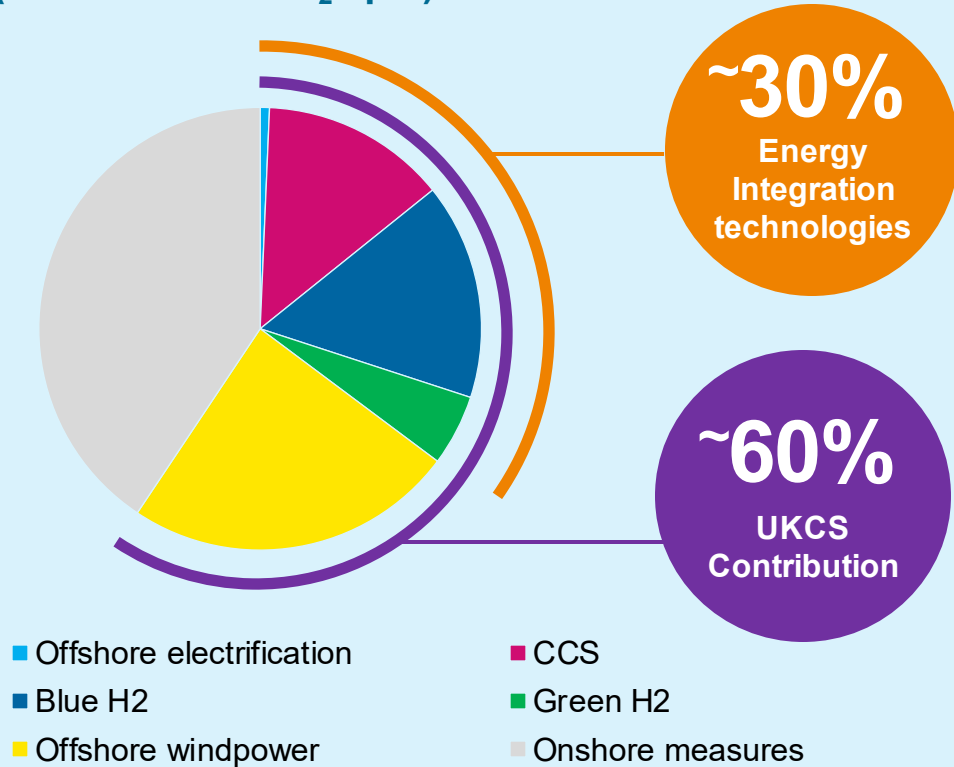
23%

Decom cost reduction
since 2017

New chapter for the North Sea



2050 net zero emission abatement from 2018 baseline
(Total = 450MtCO₂e pa.)



Carboneconomics

included in value

Corporate Governance

standards and ESG

Licensing and Climate

compatibility checkpoint

Carbon Storage

stewarding projects through lifecycle

Decom

efficiency & preservation for re-use & re-purposing

Energy Integration

the future of the basin, underway

New field approvals

net zero considerations in new developments

Stewardship

laser focus on emissions reduction & performance improvement

Robust approach

to flaring and venting

Data revolution

freely available National Data Repository and Digital Energy Platform

Holistic view

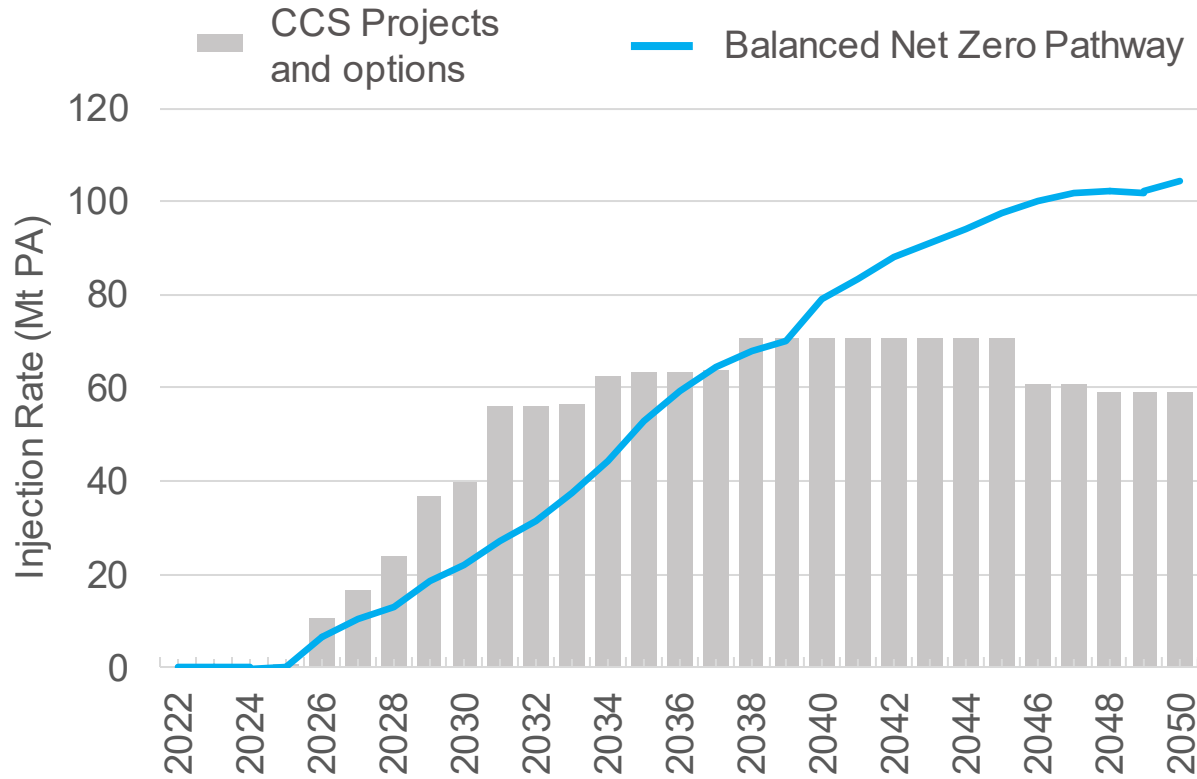
regional development & Area Plans

Spatial planning

geological and infrastructure re-use and integration



CCS – the time is now



Opportunity

Potential to be “ahead of the curve” if pace continues

78
GtCO₂

Total UKCS CO₂ storage resource estimate

75-175
MtCO₂

CCC estimate requirement in 2050



Spatial planning to high-grade future sites



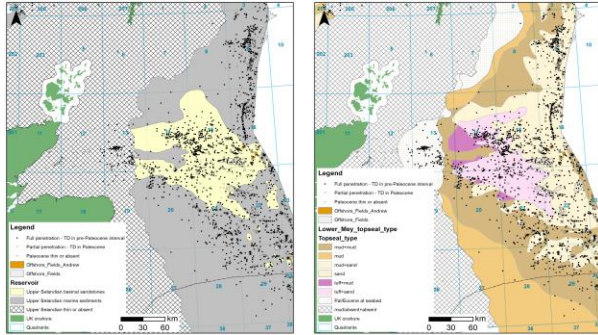
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carbon storage licences being stewarded towards storage permit application and first CO₂ injection

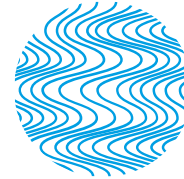
3

carbon storage licences applications being assessed

CCS – the time is now



Data mapping



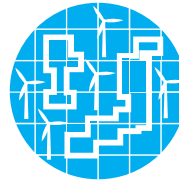
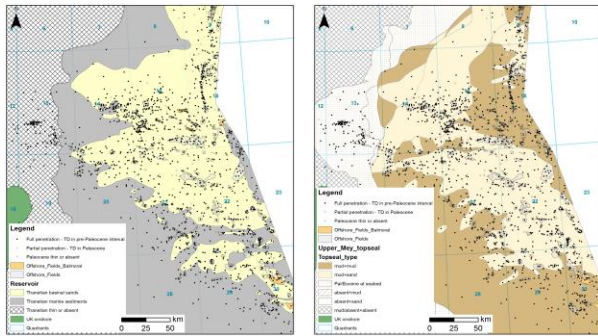
Subsurface plays



Quantitative assessment



Portfolio build



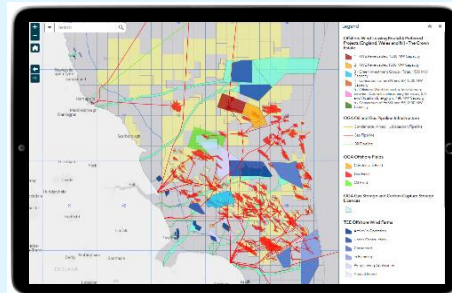
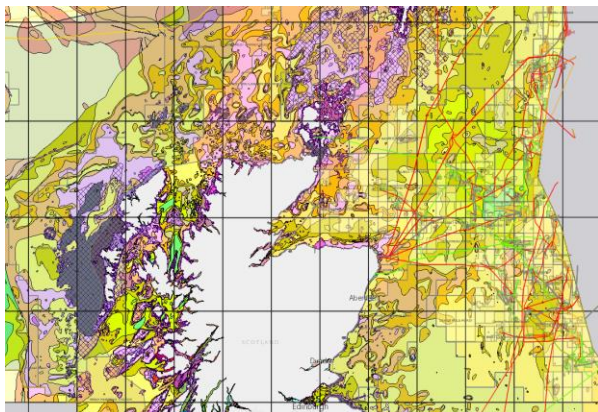
Co-location
prioritisation mapping



Licensing/
leasing

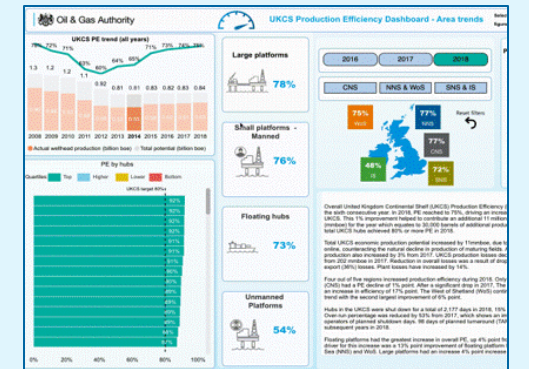


Stewardship

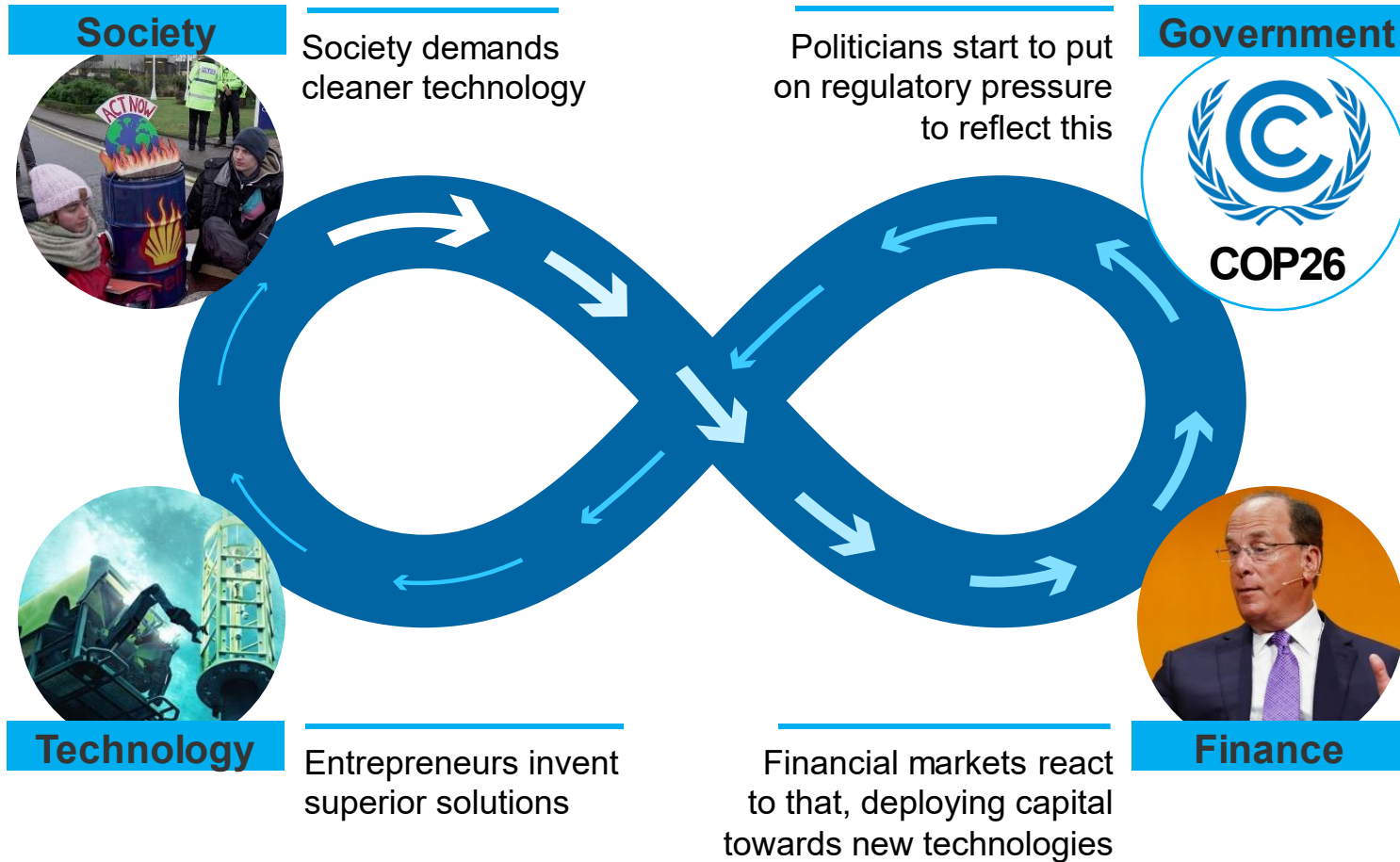


Digital Energy Platform

- National Data Repository
- GIS
- Insights, analysis, benchmarking



Pace of change – positive feedback loop

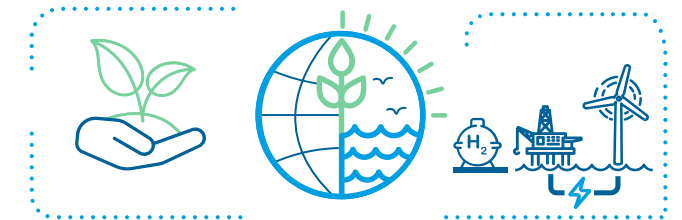


Modified from: World Economic Forum: The Speed of the Energy Transition

Leading with purpose



Climate change – Loss of Biodiversity – Social inequality



Unique opportunity post pandemic green and just recovery



Requires whole systems approach and down to all of us



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Thank you
